

Automatic Electric-Arc Surfacing

SOV/5217

in wear-resistant hard facing and the application of this process to reclaim worn parts of various equipment and to extend their service life are considered. Information is given on designs of surfacing apparatus, machines, units, and other equipment. The author thanks the following for their assistance: Candidates of Technical Sciences D.M. Rabkin, V.V. Podgayetskiy, I.K. Pokhodnya, N.A. Langer, Ye. I. Leynachuk, and I.V. Kirdo; Engineers V.P. Subbotovskiy, A.V. Mel'nik, M.D. Litvinchuk, S.S. Savenko, V.A. Lapchenko, V.K. Petrichenko, and B.S. Nanya; and Mechanics V.S. Shirin and I.K. Lyudvig. There are 256 references, mostly Soviet.

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S/125/61/000/007/006/013
D040/D112

1.2300

AUTHORS: Frumin, I.I., Nerodenko, M.M., Finkel'shteyn, M.M., Mal'tsev,
N.A.

TITLE: New electrode wire grades for wear-resistant surfacing

PERIODICAL: Avtomaticheskaya svarka, ¹⁴no. 7, 1961, 54-64

TEXT: Surfacing wire grades used presently in mechanical surfacing of machine parts at 40 Soviet metallurgical plants are 30XГСА (30KhGSA) for restoring dimensions, and ПП -3X2B8 (PP-3Kh2V8) powder-metal wire or its equivalent high-alloy ЭИ701 (EI701) wire for wear-resistant coatings. The 3Kh2V8 metal deposits are difficult to machine and crumble in the rolling mill. rolls before they wear off. This was the reason for joint experiments conducted by the Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im. Ye.O. Patona AN USSR (Electric Welding Institute "Order of the Red Banner of Labor" im. Ye.O. Paton of the AS UkrSSR), Makeyevskiy metallurgicheskiy zavod im. S.M. Kirova (Makeyevka Metallurgical Plant im. S.M. Kirov) and "Tsvetmet" Plant in Artemovsk. Three steel grades were selected for the experiments - 4x4B3Φ (4Kh4V3F), 4x2Г2B (4Kh2G2V),

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New electrode wire grades...

and 4X3Г2Ф (4Kh3G2F). The first heat of 4Kh4V3F had a higher carbon content than intended and was re-named - "5Kh4V3F". The chemical composition of the first three is (Table 1):

(%)	C	Mn	Si	Cr	W	V	Ni	S	P
4Kh4V3F	0.35-0.45	0.8-1.2	0.7-1.0	3.6-4.1	2.5-3.0	0.2-0.4	<0.3	<0.04	<0.04
4Kh2G2V	0.35-0.45	2.2-2.7	0.4-0.7	2.2-2.7	0.8-1.7	-	<0.3	<0.04	<0.04
4Kh3G2F	0.35-0.45	1.3-1.8	0.4-0.7	3.4-3.6	-	0.5-0.8	<0.3	<0.04	<0.04

Wire was drawn at the "Tsvetmet" Plant in a vertical 20-ton drawing machine with an 800 mm-diameter drum at a drawing speed of 35 m/min. Electric heating current was fed from a TCA-1000 (TSD-1000) welding transformer to the die plate and wire with the use of a roller slip ring. Colloidal graphite was used for lubricant. The distance from the current-feed point to the die and the strength of the current were selected so that the wire was heated to 600°C. One "annealing" pass with this heating was stated to make Card 2/5

New electrode wire grades...

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any intermediate reheats and pickling quite unnecessary. Shop technology for hot drawing was developed at the Khartsyzskiy staleprovolochno-kánatnyy zavod (Khartsyzsk Steel Rope Plant) on the suggestion of Engineer V.A. Chepinog. In this method an approximately 5m-long section of the wire is electrically heated to 480-500°C in front of the die plate and the current is adjusted in steps for different drawing speeds; a 6.5 mm rod can be reduced in seven passes to 3.5 mm in diameter, the drawing speed increasing from 35 m/min in the first passes to 250 m/min in the last. A new graphite lubricant greatly reduces friction in the die and ensures that the wire runs correctly over the drum. A minimum of graphite is left on the ready wire. Surfacing is produced with the use of standard AH -20 (AN-20) flux.

[Abstracter's note: The new graphite lubricant and AN-20 flux are not further specified]. Rolls surfaced by the new wire grades were tested in operation in two continuous billet mills, the "630" and the "450", at the Makeyevka plant. The rolls were preheated by induction current to 350-400°C for surfacing and then cooled slowly in heat-insulated boxes. Metal deposited with 5Kh4V3F wire had the best wear-resistance. Its composition (determined on two rolls at the Makeyevka Plant) was (Table 6):

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(%)	C	Mn	Si	Cr	W	V	S	P
	0.42	0.77	1.11	3.41	2.61	0.43	0.036	0.023
	0.40	0.78	1.11	3.36	2.63	0.43	0.037	0.025

X

The wear resistance of 4Kh2G2V coating had insufficient wear resistance, and 4Kh3G2F even lower. Rolls surfaced with 4Kh3G2F wire withstood as long a service time as rolls surfaced with PP-3Kh2V8, but the wear of the former was greater and endurance (t/mm) lower. Thus, the best results were obtained with 5Kh4V3F wire. After the rolls had been surfaced with this wire it was found possible to increase the cutting speed by 20-25% compared with rolls coated with PP-3Kh2V8 powder wire. The new wire-drawing technology is recommended for mass application. The following participated in the development of the new wire and techniques: A.V. Mel'nik and Ye.N. Morozovskaya (Electric Welding Institute im. Paton); Yu.P. Dolgoker, V.N. Pashutin, G.V. Mal'kov, V.A. Polstyanyoy, and L.B. Dolmat (Plant im. S.M. Kirov):

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D040/D112

New electrode wire grades...

V.A. Sabayev and T.A. Mal'tseva (the "Tsvetmet" Plant). There are 7 figures, 8 tables and 3 Soviet-bloc references.

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im. Ye.O. Patona AN USSR (Electric Welding Institute "Order of the Red Banner of Labor" im. Ye.O. Paton AS UkrSSR) (I.I. Frumin and M.M. Nerodenko); Makeyevskiy metallurgicheskiy zavod im. S.M. Kirova (Makeyevka Metallurgical Plant im. S.M. Kirov) (M.M. Finkel'shteyn); Artemovskiy zavod "Tsvetmet" (Artemovsk "Tsvetmet" Plant) (N.A. Mal'tsev)

SUBMITTED: January 20, 1961

Card 5/5

YAKOBASHVILI, S.B.; FRUMIN, I.I.

Investigating interphase tension on slag-metal boundaries
and the surface tension of welding slags. Avtom. svar. 14
no.10:14-19 0 '61. (MIRA 14:9)

1. Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki
imeni Ye.O. Patona AN USSR.
(Metallography) (Surface tension)

KALENSKIY, V.K.; FRUMIN, I.I.

Hard facing of internal combustion engine exhaust valves.
Avtom. svar. 15 no.8:90-91 Ag '62. (MIRA 15:7)
(Hard facing)

FRUMIN, I.I.; CHAYKA, O.V.

In the Coordinating Council on Welding. Avtom. svar. 15 no.8:93-95
Ag '62. (MIRA 15:7)
(Welding research)

YAKOBASHVILI, S.B.; FRUMIN, I.I.

Surface and interface tension of CaF_2 -base binary melts.
Avtom.svar. 15 no.10:41-45 C '62. (MIRA 15:11)

1. Ordona Trudovogo Krasnogo Znameni Institut elektrosvarki
im. Ye.O. Patona AN UkrSSR.
(Surface tension) (Flux (Metallurgy))

YAKOBASHVILI, S.B.; FRUMIN, I.I.

Measuring the viscosity of molten welding fluxes. Soob. AN Gruz.
SSR 29 no.5:555-562 N '62. (MIRA 18:3)

1. Institut metallurgii AN GruzSSR, Tbilisi. Submitted March 21,
1962.

S/125/63/000/001/003/012
A006/A106

AUTHORS: Kalenskiy, V. K., Gladkiy, P. V., Frumin, I. I.

TITLE: Investigation and development of an automatic method for
hardfacing motorcar exhaust valves

PERIODICAL: Avtomaticheskaya svarka, no. 1, 1963, 15 - 22

TEXT: A highly efficient method was developed for hardfacing automobile exhaust valves in large-scale production, using a compressed argon-shielded arc. A "A-759" plasma torch operates on the anode-part principle (Figure 4). The arc, burning between a tungsten electrode and the valve, is compressed by the argon in the internal operating nozzle. Cermet or wire rings are used as filler material; they are placed into the groove on the valve edge. The new method was tested on a semi-automatic single-position Y-66 (U-66) machine. The tests show that hardfacing with a compressed arc preserves all advantages without any deficiencies of argon-arc hardfacing. The hardfacing quality is constant; the tungsten electrode shows high durability and is well protected against splashes. The process is practically not affected by slight variations in the arc length. Welding conditions

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A006/A106

Investigation and development of:..

can be varied in a wide range; arc oscillations are not necessary; efficiency is satisfactory; the equipment is simple and can be fully automated. Due to the enumerated advantages the method is preferable to all other hardfacing methods tested. It was found that the durability of valves hardfaced with X 35H60C3 (Kh35N60S3) titanium alloy rings was 4 - 4.5 times greater than that of series-produced (ЭП48) (EP48) heat-resistant steel valves that were not hardfaced; and 1.5 - 2 times greater than durability of imported valves hardfaced with chrome-nickel alloy "arkit" N-60 (SP). There are 7 figures. ✓

ASSOCIATION: Institut elektrosvariki imeni Ye. O. Patona AN USSR (Institute of Electric Welding imeni Ye. O. Faton, AS UkrSSR)

SUBMITTED: August 21, 1962

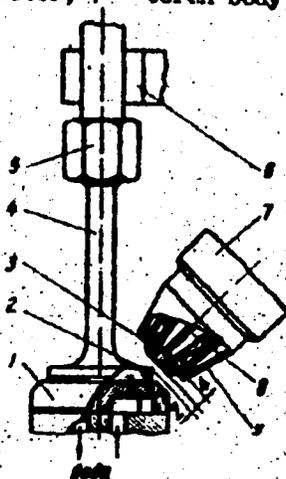
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Investigation and development of...

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A006/A106

Figure 4. Schematic diagram of hardfacing with a compressed arc

1 - copper backing; 2 - filler ring; 3 - internal nozzle; 4 - valve; 5 - rotating device holder; 6 - current conductor; 7 - torch body; 8 - tungsten electrode; 9 - external nozzle



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FRUMIN

AUTHOR:

Panovko, V. M., Engineer

16

TITLE:

All-Union Conference on the hardfacing of dies for hot and cold press-forming

PERIODICAL:

Svarochnoye proizvodstvo, no. 3, 1963, 44 - 45

TEXT:

The First All-Union Scientific-Technical Conference on hardfacing of dies was held at Volgograd from November 27 - 29, 1962. The Conference heard the following reports: N. T. Prosvirov (VNIIPMASH) on "Operational conditions and the type of forging dies"; L. A. Pozdnyakova (ENIKMASH) on "Problems of the durability of dies and press-forming steels"; V. A. Popov, ENIKMASH, on some structural peculiarities of carbide tools for cold extrusion and upsetting; I. I. Frumin, B. V. Danil'chenko (Institute of Electric Welding imeni Ye. O. Paton) on "Electric-slag hardfacing of some dies"; L. Kolomiets (IES imeni Ye. O. Paton) on "Reconditioning of dies by electric-slag hardfacing"; V. A. Timchenko (IES imeni Ye. O. Paton) on "A machine with program control for automatic hardfacing of forging dies"; Reports on manual arc-hardfacing of dies were delivered by N. V. Popov (Volgograd Tractor Plant), V. M. Panovko and Ye. G. Bloshkin (Moscow Experimental Welding Plant); O. D. Superko (Chelyabinsk Tractor Plant), N. I. Nikolko (Ural Heavy Machinebuilding Plant), P. M. Sapov ("Rostsel-mash"), N. I. Kuzovkova (GAZ), Yu. P. Zaytsev (ENIKMASH), V. I. Il'in (ZIL), Gopovin (Khar'kov "Svet shakhtera" Plant), and others. In a decision the Conference mentioned deficiencies connected with the subject, i.e. lack of unified electrodes; of centralized production; of unified technological instructions on the hardfacing of dies; of methods for evaluating the quality of hardfaced metal, and lack of high-quality electrodes for hardfacing cast-iron dies. The Conference decided to take steps in order to eliminate the aforementioned deficiencies.

KALENSKIY, V.K.; GLADKIY, P.V.; FRUMIN. I.I.

Heat resistant alloys for the hard facing of valves on
automobile engines. Avtom. svar. 16 no.8:12-18 Ag '63.
(MIRA 16:8)

1. Institut elektrosvariki imeni Ye.O. Patona AN UkrSSR.

(Hard facing)

(Automobiles—Engines—Valves)

NERODENKO, M.M.; FRUMIN, I.I.

Mechanized hard facing of die blanks for sheet-metal work.
Avtom. svar. 17 no.9:36-41 S '64. (MIRA 17:10)

1. Institut elektrosvarki im. Ye.O. Patona AN UkrSSR.

PODGAYETSKIY, Vladimir Vladimirovich; FRUMIN, I.I., doktor tekhn.
nauk, otv. red.; FURER, P.Ya., red.

[Welding slags] Svarochnye shlaki. Kiev, Naukova dumka,
1964. 74 p. (MIRA 18:2)

FRUMIN, Isidor Il'ich; YUZVENKO, Yuriy Arsen'yevich;
LEYNACHUK, Yevgeniy Ivanovich; CHEZANOV, A.A.,
nauchn. red.; GORYUNOVA, L.K., red.; IONOV, V.M., red.

[Technology of mechanized metal deposition] Tekhnolo-
giia mekhanizirovannoi naplavki. Moskva, Vysshaya
shkola, 1964. 303 p. (MIRA 18:1)

L 34948-65 EWP(e)/EPA(s)-2/EWT(m)/EWP(v)/T/EWP(t)/EWP(k)/EWP(b)/EWA(c) Pf-4

JD/HM

ACCESSION NR: AP5007350

S/0125/65/000/003/0023/0027

AUTHOR: Gladkiy, P. V. (Engineer); Frumin, I. I. (Doctor of technical sciences)

TITLE: Plasma arc surfacing

26
25
B

SOURCE: Avtomaticheskaya svarka, no. 3, 1965, 23-27

TOPIC TAGS: metal surfacing, hard surfacing, plasma spraying, plasma surfacing, plasma surfacing gun, metal powder surfacing, metal powder spraying

ABSTRACT: A prototype of a surfacing plasma gun in which surfacing material in the form of fine-grained powder is fed into the arc has been developed. The gun (see Fig. 1 of the Enclosure) operates with two arcs: one untransferred, the other transferred. The gun has three concentric nozzles. The untransferred arc burns between the tungsten electrode and the inner nozzle, which simultaneously serves for constricting the transferred arc. Facing material in the form of a fine-grained powder is blown by a carrier gas into the arc through a conic gap between the inner and middle nozzles. The plasma jet melts the powder and transfers it to the workpiece surface fused by the direct arc. The arcs are fed by individual power sources which make possible individual control of each arc. Three gas streams flow through the gun during operation. The central stream, usually argon, flows between the electrode

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ACCESSION NR: AP5007350

and the inner nozzle at a rate of 1—2.5 ℓ/min; it protects the tungsten electrode against oxidation and stabilizes and constricts the arcs. The carrier stream, argon, helium, or a mixture of argon with 5—10% H₂ flowing at a rate of 5—10 ℓ/min, feeds the filler material into the arc. Argon, helium, nitrogen, etc., flowing at a rate of 10—15 ℓ/min, is used in the outer shielding stream. Single-pass deposits 0.5 to 6.0 mm thick with a minimum fusion of the base metal can be obtained. Orig. art. has: 7 figures and 1 table. [MS]

ASSOCIATION: Institut electrosvarki im. Ye. O. Patona ANUkrSSR (Electric Welding Institute, AN UkrSSR)

SUBMITTED: 25Jul64

ENCL: 01

SUB CODE: ME, MM

NO REF SOV: 003

OTHER: 005

ATD PRESS: 3214

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L 34948-65

ACCESSION NR: AP5007350

ENCLOSURE: 01

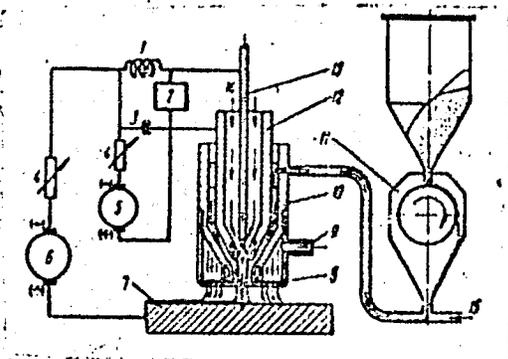


Fig. 1. Surfacing with the blowing of powder into the arc

1 - Choke coil; 2 - oscillator; 3 - capacitor; 4 - rheostat;
5 - power source for the indirect arc; 6 - power source for
the direct arc; 7 - workpiece; 8 - protective nozzle; 9 - pro-
tective gas; 10 - outer nozzle; 11 - filler material feeder;
12 - inner nozzle; 13 - tungsten electrode; 14 - plasma gen-
erating gas; 15 - powder carrying gas.

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PHASE I BOOK EXPLOITATION 944

Frumin, I.L.

Proizvodstvennaya moshchnost' mashinostroitel'nogo zavoda i rezervy proizvodstva; iz opyta mashinostroitel'nykh zavodov massovogo i krupnoseriynogo proizvodstva (Productive Capacity of a Machinery-manufacturing Plant and Production Reserves; From the Experience of Machinery-manufacturing Plants of Mass and Series Production) Moscow, Mashgiz, 1955. 59 p. 4,000 copies printed.

Reviewers: Rozanov, K.P., Engineer, and Bogdanovich, Ya. M., Engineer; Ed.: Shevyakov, G.N., Engineer; Ed. of Publishing House: Popolov, Ya. N.; Tech. Ed.: Sokolova, T.F.; Managing Ed. for literature on the economics and organization of production (Mashgiz): Saksaganskiy, T.D.

PURPOSE: This pamphlet is intended for economists, party workers, and engineering and technical personnel of machinery-manufacturing establishments.

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Productive Capacity of a Machinery-manufacturing Plant (Cont.) 944

COVERAGE: The pamphlet briefly summarizes basic problems of methodology employed in determining and calculating the productive capacities of machinery-manufacturing establishments specializing in mass and series production. Instructions on how to calculate existing capacities and specific examples of calculations are outlined and discussed. These instructions were prepared by the following engineers: Irumin, I.L., Zhebrak, A.M., Kellerman, P.M., Schastlivtsev, P.P., and Pozigun, O. Ye. with the assistance of engineers Shneyerov, G.A. and Beletskiy, D.G. There are no references.

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AVAILABLE: Library of Congress	

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FRUMIN, I L

25(5)

(φ 3)

PHASE I BOOK EXPLOITATION

SOV/1314

Moskovskiy dom nauchno-tekhnicheskoy propagandy imeni F.E.
Dzerzhinskogo

Opredeleniye proizvodstvennykh moshchnostey v mashinostroyeni
(Determining Productive Capacities in Machinery Manufacturing)
Moscow, Mashgiz, 1957. 185 p. 8,000 copies printed.

Additional Sponsoring Agency: Obshchestvo po rasprostraneniya politicheskikh i nauchnykh znaniy RSFSR.

Ed.: Voskresenskiy, B.V.; Tech. Ed.: Uvarova, A.F.; Managing Ed.
for Literature on the Economics and Organization of Production
(Mashgiz): Saksaganskiy, T.D.

PURPOSE: This collection of articles is for engineering and technical personnel of manufacturing plants and national economic councils.

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Determining Productive Capacities (Cont.)

SOV/1314

COVERAGE: This collection of articles explains the methodology and practice employed in determining the productive capacities of machinery manufacturing establishments and discusses the discovery and utilization of untapped productive capacities. Material included in this collection of articles was presented and discussed at the second scientific and technical conference on exchange of experience in the field of dealing with the methodology and actual determination and utilization of productive capacities in Soviet machinery manufacturing plants, convened in December of 1955 by the Moskovskiy dom nauchno-tehnicheskoy propagandy imeni F.E. Dzerzhinskogo (Moscow House imeni F.E. Dzerzhinskiy for Dissemination of Scientific and Technical Data). There are no references. No personalities are mentioned.

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AVAILABLE: Library of Congress (HD 9705.R92M64)

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3-20-59

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FRUMIN, I.L.
FRUMIN, I.L., inzh.

Determining production potentialities. Sel'khoz mashina no.11:23-27
N '57. (MIRA 10:12)

1. Nauchno-issledovatel'skiy institut Traktorosel'khoz mash.
(Agricultural machinery industry)

FRUMIN, I.L.

Effect of the degree of mass production on the amount of labor
used in the manufacture of farm machinery. Trakt. i sel'khoz mash
no. 7:40-42 J1 '58. (MIRA 11:7)

1. Nauchno-issledovatel'skiy institut Traktorosel'khoz mash.
(Agricultural machinery industry)

SATEL', Eduard Adamovich, prof., doktor tekhn.nauk, red.; LETENKO, Viktor Aleksandrovich, kand.ekon.nauk; BRYANSKIY, Georgiy Anatoliyevich, kand.ekon.nauk; SAMPORSKIY, Georgiy Ivanovich, kand.ekon.nauk; ORLOV, N.A., prof., retsenzent; FRUMIN, I.L., inzh.-ekon., retsenzent; STEL'MAKHOVICH, N.A., kand.tekhn.nauk, retsenzent; BELYAYEV, A.V., inzh.-ekon., retsenzent; SOCHINSKIY, A.R., inzh., red.; SALYANSKIY, A.A., red.izd-va; EL'KIND, V.D., tekhn.red.

[Principles of the technology of production and labor organization] Osnovy tekhnicheskoi podgotovki proizvodstva i organizatsii truda. Pod red. E.A.Satelia. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroit.lit-ry, 1959. 330 p. (MIRA 12:10)
(Machinery industry)

FRUMIN, I.L., inzh.

Degree of mechanization and automation and the increase of
productivity in the machinery industry. Vest.mashinostr. 42
no.11:72-76 N '62. (MIRA 15:11)
(Machinery industry--Production standards)
(Automation)

FRUIN, J.

"Some Problems of Standardizing Screw Threads", P. 142, (1953),
Vol. 5, No. 2, September 1953, Budapest, Hungary)

SC: Monthly List of East European Accessions (EMAL), 16, Vol. 4, No. 3,
March 1954, Uncl.

FINDING, J.

"Our Technical Language", p. 145, (HABANOVICH, Vol. 5, No. 2, September 1953, Budapest, Hungary)

FC: Monthly List of East European Accessions (FMI), IC, Vol. 4, No. 3, March 1955, Uncl.

FRUMIN, L.B. (Kazan')

~~Neurasthenia. Fel'd. 1 akush. 21 no.4:3-8 Ap '56.~~
(NEURASTHENIA)

(MLRA 9:8)

FRUMIN, L.L.

Syndrome of the sphenopalatine ganglion. Vest. otorinolar. No.3:
(CLML 19:4)
49-55 May-June 50.

1. Of the Ukrainian Scientific-Research Institute for Diseases of the Ear, Throat, and Nose and of the LOR (Otorhinolaryngological) Department (Director of Institute and of the LOR Department -- Prof. L.L.Frumin) of Khar'kov Institute for the Advanced Training of Physicians (Director -- Docent I.I.Ovsiyenko).

FRUMIN, L.L.

MOSHKEVICH, S.M.; RUBINOVICH, M.S.

Correlation between tonsillitis and tuberculosis in children and adolescents. Probl.tub. no.3:34-40 My-Je '55. (MLRA 8:8)

1. Iz kafedry oto-laringologii (zav.-prof. L.L.Frumin) i kafedry tuberkuleza (zav.-prof. B.L.Yakhnis) Ukrainskogo instituta usovshenstvovaniya vrachey (dir.-dotsent I.I.Ovsienko).

(TONSILLITIS,

relation to tuberc. in child.)

(TUBERCULOSIS,

relation to tonsillitis in child.)

FRUMIN, L.L., professor

A new modification in the method of reconstructing total and subtotal defects of the nose with a Filatov pedicle graft. Vest. oto-rin. 18 no.1:26-30 Ja-F '56. (MLRA 9:6)

1. Iz kafedry bolezney ukha, gorla i nosa Ukrainського instituta usovershenstvovaniya vrachey.

(NOSE, surg.

plastic, reconstruction of total & subtotal defects with Filatov's tube flap)

(SKIN TRANSPLANTATION

Filatov's tube flap in plastic reconstruction of total & subtotal defects of nose)

FRUMIN, L.L., professor (Khar'kov)

Tissue therapy for chondritis nodosa, fibromas and fibromatous
enlargement of the vocal cords. Vrach.delo no.8:809-811 Ag '57.
(MLRA 10:8)

1. Kafedra bolezney ukha, gorla i nosa (sav. - prof. L.L.
Frumin) Ukrainskogo instituta usovershenstvovaniya vrachey
(TISSUE EXTRACTS) (VOCAL CORDS--TUMORS)

~~FRUMKIN, M.L.~~

Sulfitation of tomatoes. Kons. i ov. prom. 12 no.1:18-21 Ja '57.
(MIRA 10:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut konservnoy i
ovoshchesushil'noy promyshlennosti.
(Tomatoes--Preservation) (Sulfur dioxide)

MUSTAFIN, I.S.; FRUMINA, N.M.

I.M. Korenman's "Analytical chemistry of potassium". Zhur. anal.
khim. 19 no.11:1419-1420 '64. (MIRA 18:2)

KIRSANOVA, M.K., kand.tekhn.nauk; FRUMIN, N.Ye., inzh.

Mounting construction elements of large-panel apartment houses
directly from trucks. *Buil. stroi. tekhn.* 15 no.9:13-15 S '58.
(MIRA 11:10)

1. Nauchno-issledovatel'skiy institut zhilishcha Akademii stroi-
tel'stva i arkhitektury SSSR.
(Apartment houses) (Precast concrete construction)

FRUMIN, S. R.

33411. Primeneniye Gazovoy Rezki V Rechnom Sudostroyeni i Kotlostroyeni.
Trudy Tsentr. Nauch.-Issled. In-ta Rech. Flota, VYP. 4, 1949, s. 77-103.

30. Ietopis' Zhurnal'nykh Statey, Vol. 45, Moskva, 1949

1. FRUMIN, S. R., ENG.
2. USSR (600)
4. Dredging Machinery
7. Rational selection of materials for dredge pump parts subject to wear.
Rech. transp. 12. No. 5. 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1953, Unclassified.

FRUMIN, S.R., kandidat tekhnicheskikh nauk.

ECR electrodes for vertical and overhead position welding.
Trudy TSNIRF no.28:140-158 '54. (MIRA 9:1)

(Ships--Welding) (Electrodes)

FRUMIN, S.R.

BENJA, F.F., kandidat tekhnicheskikh nauk; VOL'PERT, G.D., inzhener;
YFCEL'YANOV, N.P., kandidat tekhnicheskikh nauk; KLEKOVKIN, G.P.
inzhener; KUZMAK, Ye.M., doktor tekhnicheskikh nauk, professor;
NILOVSKIY, I.A., laureat Stalinskoy premii; PANOV, B.N., inzhener;
POKHODNYA, I.K., inzhener; FRUMIN, I.I., kandidat tekhnicheskikh
nauk; FRUMIN, S.R., inzhener; ZVEGINTSEVA, K.V., inzhener, redak-
tor; GOLOVIN, S.Ya., inzhener, redaktor; MATVYKVA, L.S., redaktor;
SOKOLOVA, T.F., tekhnicheskij redaktor.

[Automatic built-up welding with wear-resistant alloys] Avtoma-
ticheskaya neplavka iznosoustoichivymi splavami. Moskva, Gos.
nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1955. 244 p.(MIRA 8:11)
(Electric welding)

Frumin, S.R.

137-1957-12-24157

Translation from: Referativnyy zhurnal Metallurgiya, 1957, Nr 12, p 181 (USSR)

AUTHORS: Bel'chuk, G. A., Frumin, S. R.

TITLE: Local Heating Employed for Straightening of Sheet-Metal Hull Sections Deformed by Welding (Pravka mestnymi nagrevami deformirovannykh svarkoy listovykh konstruktsiy korpusa)

PERIODICAL: Tr. Tsent. n.-i. in-ta rech. flota, 1957, Nr 36, pp 142-164

ABSTRACT: An analysis of existing methods for hot and cold straightening (S) of sheet-metal hull sections of river vessels in the course of their manufacture and repair. An approximate theoretical analysis is presented, together with an experimental investigation of the process of the S of elastically deformed strips and bulged sections by means of local heating. The results of an industrial verification of the proposed method of hot S are given. A method is proposed for the determination of the parameters of the S process by means of local heating as a function of the shape and the dimensions of the curved sections and of a calculation of the technological processes for the S of structures made of thin sheet metal. It is established that the currently employed method for the S of structures made of thin sheet metal by spot heating areas (20-60 mm in diameter,

Card 1/2

137-1957-12-24157

Local Heating Employed for Straightening of Sheet-Metal Hull (cont.)

arranged either successively or in a staggered fashion) is ineffective. More effective is the method of heating strip areas distributed along the slope of the bulged sections and parallel to their boundaries, and subjecting them to hammering; this ensures that the contraction proceeds in the proper directions. Heating the top of the bulge is not recommended.

V. S.

1. Ship hulls-Welding-Deformation
2. Heating-Applications

Card 2/2

FRUMIN, Semen Romanovich, kand. tekhn. nauk; BLOKH, Rafail' L'vovna, inzh.;
BLAGOVESHCHENSKAYA, Valentina Vladimirovna, inzh.; RYZHIN, Z.M., inzh.
red.; SHILLING, V.A., red. izd-va; GVIRTS, V.L., tekhn. red.

[Ceramic fluxes for automatic and semiautomatic welding of low-carbon
steel] Keramicheskie fliusy dlia avtomaticheskoi i polnavtomaticheskoi
svarki nizeouglerodistoi stali. Leningrad, 1961. 23 p. Lenin-
gradskii Dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom.
Serii: Svarka i paika metallov, no.4) (MIRA 14:7)
(Steel—Welding)

FRUMIN, Semen Romanovich; NIKITIN, G.M., kand. tekhn. nauk, red.;
~~VOLCHOK, K.M., tekhn. red.~~

[Accident prevention during electric welding for ship repair]
Tekhnika bezopasnosti pri elektrosvarke v sudoremonte. Pod
red. G.M.Nikitina. Leningrad, Izd-vo "Rechnoi transport,"
1961. 30 p. (MIRA 15:1)
(Ships--Maintenance and repair)
(Electric welding--Safety measures)

BENUA, F.F.; DUKOR, Z.G.; KLYUSHENKOV, I.S.; KONSTANTINOV, V.P.;
KOTLYAR, D.I.; MAYKOV, N.K.; PRAYSMAN, A.D.; SERGEYEV,
V.I.; TRUFANOV, V.G.; FEDOROV, V.F.; FRUMIN, S.R.;
CHERTKOV, Kh.A.; SHIBANOV, B.V.; CHERNOV, M.I., red.;
VITASHKINA, S.A., red.izd-va; BODROVA, V.A., tekhn. red.

[Handbook on ship repairs in two volumes] Spravochnik po
remontu sudov v dvukh tomakh. Pod obshehei red. M.I.
Chernova. Moskva, Izd-vo "Rechnoi transport." Vol.1. 1963.
550 p. (MIRA 16:12)

(Ships--Maintenance and repair)
(Marine engineering--Handbooks, manuals, etc.)

BENUA, F.F.; DUKOR, Z.G.; KLYUSHENKOV, I.S.; KONSTANTINOV, V.P.;
KATLER, A.I.; MAYKOV, N.K.; PRAYSMAN, A.D.; SERGEYEV, V.I.;
TRUFANOV, V.G.; FEDOROV, V.F.; FRUMIN, S.R.; CHERTKOV, Kh.A.;
SHIBANOV, B.V.; VATASHKINA, S.A., red.izd-va; CHERNOV, M.I.,
red.; BODROVA, V.A., tekhn. red. .

[Handbook on ship repairs in two volumes] Spravochnik po
remontu sudov v dvukh tomakh. Pod obshchei red. M.I.Chernova.
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(Ships--Maintenance and repair) (MIRA 16:9)

FRUMIN, S.R.; BLOKH, R.L.

Ceramic L-5 flux for the welding of low-carbon steel. Avtom.
svar. 16 no.12:34-39 D '63. (MIRA 17:1)

1. Leningradskiy institut vodnogo transporta.

GATOVSKIY, K.M., kand. tekhn. nauk; PRUMIN, S.R., kand. tekhn. nauk

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mills and exhaust fans. Svar. proizv. no.5:22-25 My '64.
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Alloying ceramic fluxes for wear-resistant hard facing. Trudy
LITV no.80:47-53 '65. (MIRA 18:10)

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Tool Plant

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FRUMIN, YU. L.

Konstruirovaniye vysokoproizvoditel'nogo instrumenta; zametki iz praktiki. Moskva, Mashgiz, 1946. 78 p. diags.

Designing of a highly efficient tool; practical notes.

WaU

DLC: TJ1185.F88

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

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Konicheskaja roz'ba. Moskva, Mashgiz, 1948. 51 p. diagrs.

Bibliography: p. 527.

Bevel thread.

DLC: TJ193.F95

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

FRUMIN, Yu.L., inzhener.

Problems concerning the uniformity of threads. Vest.mash. 33 no.3:79-82
Mr '53. (MLRA 6:5)
(Screw threads, Standard)

FRUMIN, YU. L.

Dliny pod sbe~~r~~ metriceskoi rez'by. (Vestn. Mash., 1948, no. 4, p. 18-20)

Length of the run-out of the metric thread.

DIC: TN4.V4

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

FRUMEN, YU. L.

Germetichnaia konicheskaia rez'ba. (Vestn. Mash., 1950, no. 2, p. 20-23)

Airtight bevel thread.

DLC: TN4.V4

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

FRUMIN, Yu. L.

KARATYGIN, A.M., kandidat tekhnicheskikh nauk, dotsent; KORSHUNOV, B.S.,
kandidat tekhnicheskikh nauk; FRUMIN, Yu.L., inzhener, retsentsent;
ZUSMANOVSKIY, M.K., inzhener, retsentsent; KATULOVSKIY, D.I., kan-
didat tekhnicheskikh nauk, redakter.

[Sharpening and lapping cutting tools] Zatochka i dovodka rezhu-
shchego instrumenta. Moskva, Gos. nauchno-tekhn. izd-vo mashino-
stroitel'noi i sudostroitel'noi literatury, 1954. 206 p. (MLBA 7:7)
(Cutting tools)

Frumin, Yu. L.

USSR/Engineering - Machine tools

Card 1/1 Pub. 103 - 10/23

Authors : Frumin, Yu. L.

Title : ~~.....~~
 : Certain problems concerning the geometry of thread cutting tools

Periodical : Stan. 1 instr. 2, 29-30, Feb 1954

Abstract : The conditions of rational geometry of thread-cutting tools are discussed. The geometrical factors affecting the thickness of the threaded layer are listed. The threading process is considered the smoothest when each tooth of the threader cuts a layer of uniform length, i. e. the cuts per each tool tooth must be equal. The area cut by each tooth consists of the areas cut by each turn of the tool bit. Drawings.

Institution :

Submitted :

FRUMIN, Yu.L., inzhener.

Standardization of cutting tool semiproducts. Vest.nash.35 no.9:
69-74 S '55. (MLRA 9:1)
(Cutting tools--Standards)

FRUMIN, Yu. L.

Subject : USSR/Engineering AID P - 5164
Card 1/1 Pub. 103 - 5/19
Author : Frumin, Yu. L.
Title : Axial stresses in thread-generating process
Periodical : Stan. i instr., 6, 22-24, Je 1956
Abstract : The author discusses the theory of making threads and bolts. He deals with the axial stresses occurring in the thread-generating process. Ten drawings.
Institution : None
Submitted : No date

FRUMIN, Yu.L.
AMTIPOV, K.F., inzhener; BALAKSHIN, B.S., doktor tekhnicheskikh nauk, professor; BARYLOV, G.I., inzhener; BEYZEL'MAN, R.D., inzhener; BERDICHEVSKIY, Ya.G., inzhener; BOBKOV, A.A., inzhener, KALININ, M.A., kandidat tekhnicheskikh nauk; KOVAN, V.M., doktor tekhnicheskikh nauk, professor; KORSAKOV, V.S., doktor tekhnicheskikh nauk; KOSILOVA, A.G., kandidat tekhnicheskikh nauk; KUDRYAVTSEV, N.T., doktor khimicheskikh nauk, professor; KURYSHEVA, Ye.S., inzhener; LAKHTIN, Yu.M., doktor tekhnicheskikh nauk, professor; NAYERMAN, M.S., inzhener; NOVIKOV, M.P., kandidat tekhnicheskikh nauk; PARIYSKIY, M.S., inzhener; PEREPONOV, M.N., inzhener; POPILOV, L.Ya., inzhener; POPOV, V.A., kandidat tekhnicheskikh nauk; SAVERIN, M.M., doktor tekhnicheskikh nauk, professor; SASOV, V.V., kandidat tekhnicheskikh nauk; SATAL', E.A., doktor tekhnicheskikh nauk, professor; SOKOLOVSKIY, A.P., doktor tekhnicheskikh nauk, professor [deceased]; STANKOVICH, V.G., inzhener; FRUMIN, Yu.L., inzhener; KHRANCOY, M.I., inzhener; TSEYTLIN, L.B., inzhener; SHOKHOV, Yu.V., kandidat tekhnicheskikh nauk; BABKIN, S.I., kandidat tekhnicheskikh nauk; VOLKOV, S.I., kandidat tekhnicheskikh nauk; GORODETSKIY, I.Ye., doktor tekhnicheskikh nauk, professor; GOBOSHEIN, A.K., inzhener; DOSCHATOV, V.V., kandidat tekhnicheskikh nauk; ZAMALIN, V.S., inzhener; ISAYEV, A.I., doktor tekhnicheskikh nauk, professor; KEDROV, S.M., kandidat tekhnicheskikh nauk; MALOV, A.M., kandidat tekhnicheskikh nauk; MARDANYAN, M.Ye., inzhener; PANCHENKO, K.P., kandidat tekhnicheskikh nauk; SEKRISTEV, D.M., inzhener; STAYEV, K.P., kandidat tekhnicheskikh nauk; SYROVATCHENKO, P.V., inzhener; TAURIT, G.D., inzhener; SL'YASHEVA, M.A., kandidat tekhnicheskikh nauk;

(Continued on next card)

AKTIPOV, K.F. --(continued) Cont. 2.
GUMNOV, I.I., redaktor; DUBINSKIY, I.I., redaktor;
redaktor; GADINAO, D.V., redaktor; [deceased]; SOKOLOVA, T.S., redaktor.

[Medical bullier's manual] Spisok literatury po
v dvukh tomakh, red.sovet V.M. [illegible]
i dr. Moskva, Gos.nauchno-tekhn. izdatel'stvo
Vol. 1. (Pol red. A.G. Apsilov) 1964. 534 p.
Kaleva; 1964. 534 p.
(Medical literature)

FRUMIN, YU. L.

ANTIPOV, K.F., inzh.; BALAKSHIN, B.S., prof., doktor tekhn.nauk; BARYLOV, G.I., inzh.; BEYZEL'MAN, R.D., inzh.; BERDICHEVSKIY, Ya.G., inzh.; BOBKOV, A.A., inzh.; KALININ, M.A., kand.tekhn.nauk; KOVAN, V.M., prof., doktor tekhn.nauk; KORSAKOV, V.S., doktor tekhn.nauk; KOSILOVA, A.G., kand.tekhn.nauk; KUDRYAVTSEV, N.T., prof., doktor khim.nauk; KURYSHIEVA, Ye.S., inzh.; LAKHTIN, Yu.M., prof., doktor tekhn.nauk; NAYKRMAN, M.S., inzh.; NOVIKOV, M.P., kand.tekhn.nauk; PARIYSKIY, M.S., inzh.; PEREPONOV, M.N., inzh.; POPILOV, L.Ya., inzh.; POPOV, V.A., kand.tekhn.nauk; SAVERIN, M.M., prof., doktor tekhn.nauk; SASOV, V.V., kand.tekhn.nauk; SATEL', R.A., prof., doktor tekhn.nauk; SOKOLOVSKIY, A.P., prof., doktor tekhn.nauk [deceased]; STANKOVICH, V.G., inzh.; FRUMIN, Yu.L., inzh.; KHRAMOY, M.I., inzh.; TSEYTLIN, L.B., inzh.; SHUKHOV, Yu.V., kand.tekhn.nauk; MARKUS, M.Ye., inzh., red. [deceased]; GRANOVSKIY, G.I., red.; DEM'YANYUK, F.S., red.; ZUBOK, V.N., red.; MALOV, A.N., red.; NOVIKOV, M.P., red.; CHARNKO, D.V., red.; KARGANOV, V.G., inzh., red. graficheskikh rabot; SOKOLOVA, T.F., tekhn.red.

[Manual of a machinery designer and constructor; in two volumes]
Spravochnik tekhnologa-mashinostroitelia; v dvukh tomakh. Glav. red. V.M.Kovan. Chleny red.soveta B.S.Balakshin i dr. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry. Vol.1. Pod red. A.G.Kosilovoi. 1958. 660 p. (MIRA 13:1)
(Mechanical engineering--Handbooks, manuals, etc.)

AUTHOR: Frumin, Yu.L. SOV-113-58-10-12/16

TITLE: The Practicality of Thread Part Designs (Tekhnologichnost' konstruksii rez'bovykh detaley)

PERIODICAL: Avtomobil'naya promyshlennost', 1958, Nr 10, p 35-38 (USSR)

ABSTRACT: The practicality of thread part designs was studied at the Moscow Automobile Plant imeni Likhachev. The self-cost or production cost is thereby one of the most important factors. This consists of: the cost of material and the cost of labor. The author then quotes examples of the producing of thread parts, i.e. bolts, nuts, etc. by rolling cutting, pressing or casting. He recommends to replace the conical thread according to GOST 6111-52 by a shorter type used in the US automobile industry. He compares both these threads in Table 1. A similar comparison between Soviet and US standards is made in Table 6. Recommendations are also given on the saving of material by using the proper sizes of bolts and nuts. There are 5 sets of diagrams, 5 tables, 1 graph and 4 Soviet references.

ASSOCIATION: Moskovskiy avtozavod imeni Likhacheva (Moscow Automobile Plant imeni Likhachev)

1. Screw threads---Production 2. Screw threads--Standards

Card 1/1

SHATIN, V.P., inzh.; KUZ'MIN, V.V., inzh.; DENISOV, P.S., inzh.;
FRUMIN, Yu.L., inzh., retsenzent; RYBAKOVA, V.I., inzh.,
red.; MODEL', B.I., tekhn.red.

[Structural elements and standard fastening units for metal-
cutting tools; handbook] Konstruktivnye elementy i normali-
zovannye uzly krepleniia rezhushchikh instrumentov; spravochnik.
Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959.
264 p. (MIRA 13:2)
(Metal-cutting tools--Handbooks, manuals, etc.)

FRUMIN, Yu.L.

Designing equipment for machine-tool units and automatic lines.
Stan.i instr. 33 no.9:5-8 S '62. (MIRA 15:9)
(Machine tools--Design)

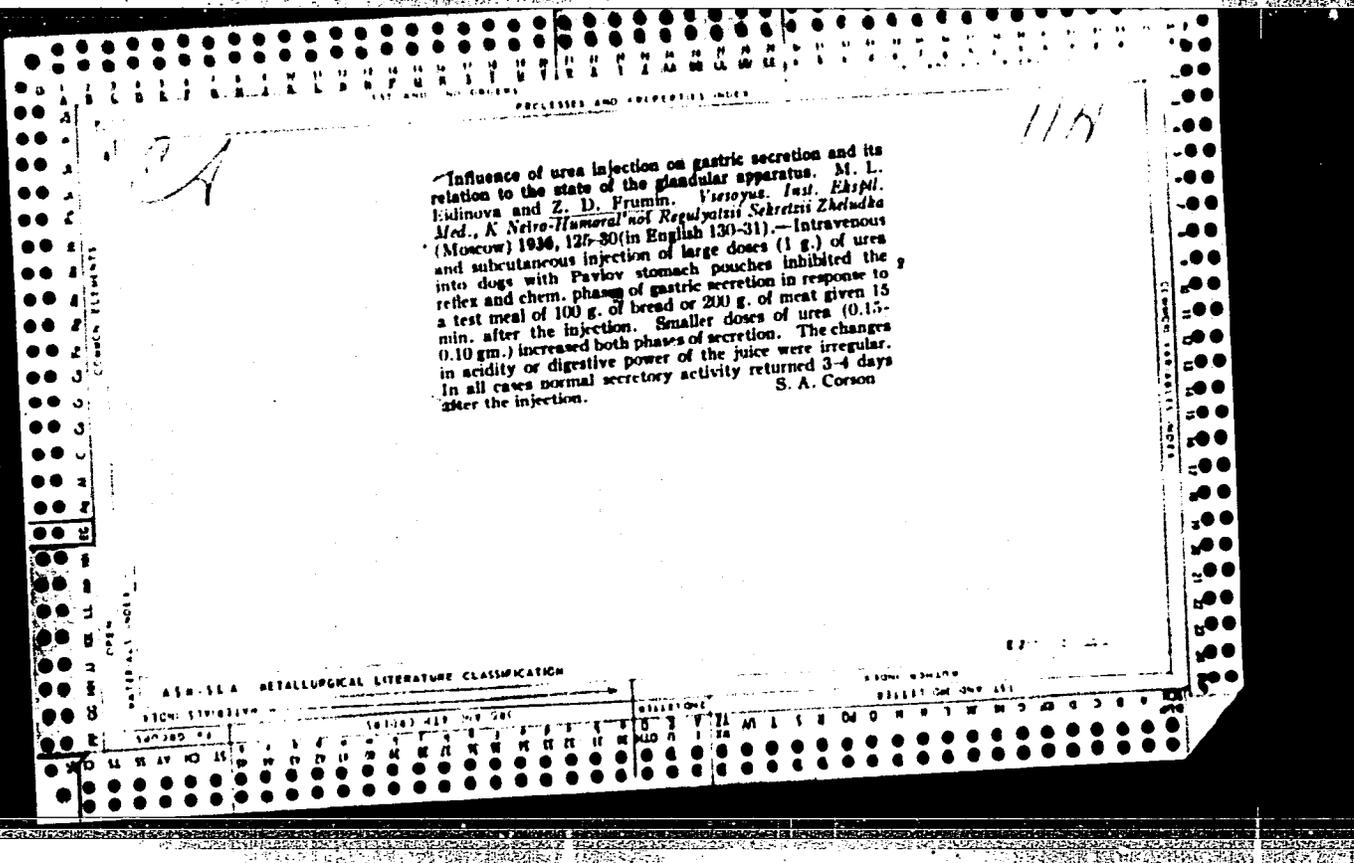
FRUMIN, Yu. L.; LUKASHEVICH, G. Ye., inzh., ratsenent; KUNIN, P. A., inzh., red.;
UVAROVA, A. F., tekhn. red.

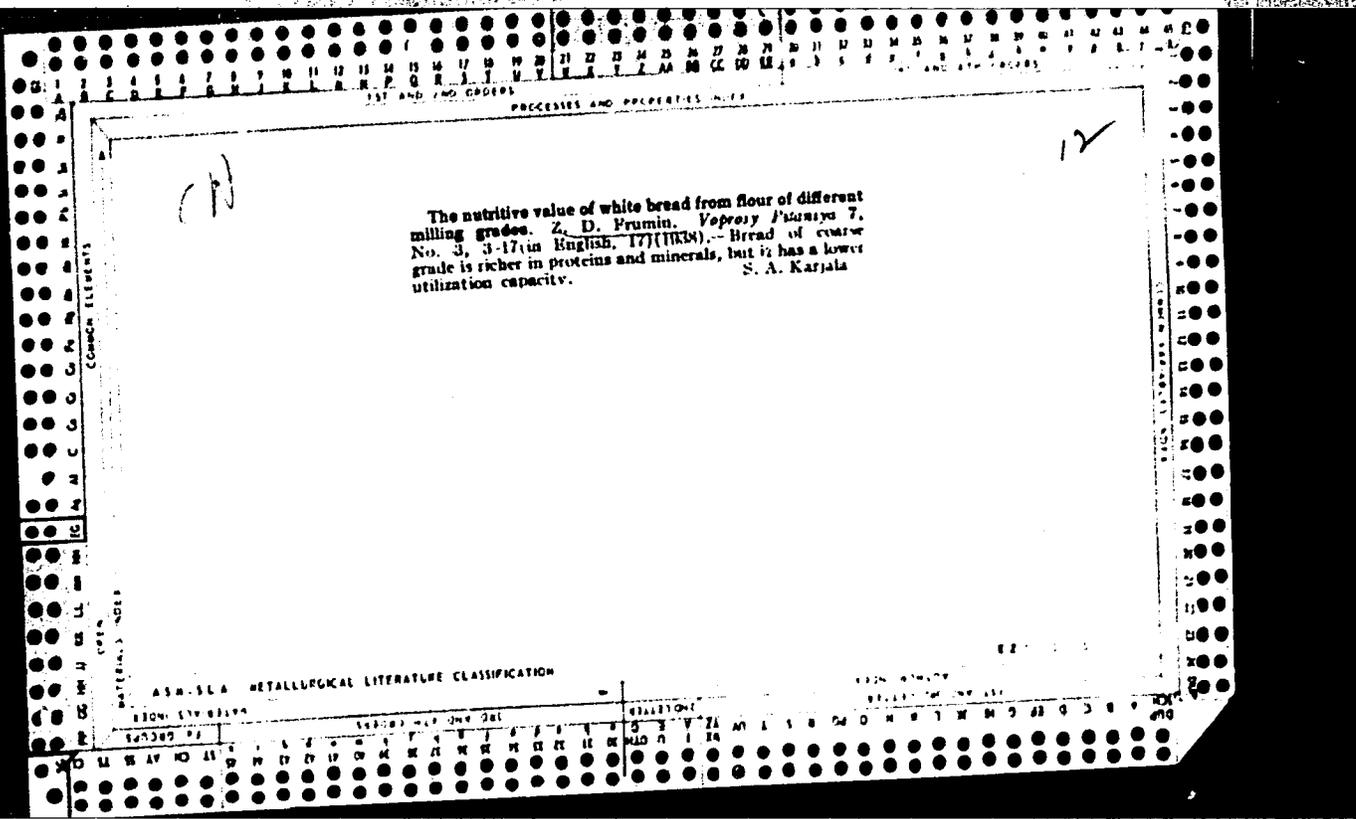
[High-production thread-generating tools] Vysokoproizvoditel'-
nyi rez'boobrazuiushchii instrument. Moskva, Mashgiz, 1963.

162 p.

(MIRA 16:6)

(Screw cutting) (Screw-thread rolling)





1ST AND 2ND ORDERS PROCESSES AND PROPERTIES INDEX

DA

11E

Assimilation of foodstuffs and the nitrogen, calcium, and phosphorus balance in children with coxial tuberculosis. Z. D. Frumin (Dept. of Infant Feeding, Central Inst. of Nutrition, Moscow, USSR). *Voprosy Pitaniya* 10, No. 5-6, 14-24(1941). -The protein decompositon is increased, its intensity depending on the course of the disease. Ca, P, and protein retention is decreased. The assimilation of foodstuffs remains normal, and is greater in the fall and winter season. T. Lances

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

FROM STV-BELVA

140087

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

FRUMIN, Z. I.

Frumin, Z. D. "The organism's utilization of the Ca and P of bone meal," -- With the assistance of G. P. Toropova and T. I. Tsvarkina, Nauch. trudy In-ta pitaniya (Akad. med. nauk SSSR), Moscow, 1948, p. 146-49

So: U-3506, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)

FRUMIN, Z.D., BERLIN, L.B., KHLADEK, E.I.

"

"Assimilation of Foodstuffs in Chronic Enterocolitis."

Terap. Arkh. 21, No. 5, 36-47, Sept.-Oct., 1949. 11 refs.

The authors investigated during 1946-7 the assimilation of food in 4 patients with chronic colitis. All patients received a diet containing 141 to 150 g. protein 60 to 63g. fat, and 400 to 500 g. carbohydrate daily. The content of nitrogen carbohydrates, fat, minerals, protein, calcium, and phosphate in the diet was known. Food which was left over by the patient, and the urine and stools in each case were chemically analysed for nitrogen, calcium, phosphates, minerals proteins, fat and carbohydrates. The investigations were first carried out on admission and ten towards the end of the treatment, which included the administration of liver extract and vitamins. Five case histories are given. All patients had suffered from very severe diarrhoea, loss of weight, lassitude, and symptoms of dehydration and anaemia. In 2 cases there were achlorhydria and hypoproteinaemia. The absorption of protein in one case was 69.71% on admission and 86.9% after treatment. The mineral balance was negative on admission and positive after treatment. Calcium and phosphate balance was practically normal, and fat and carbohydrate assimilation was always normal, and

In every severe case of chronic entero-colitis with osteoporosis, anaemia, and normal gastric juice, the protein assimilation was 82.1% and fat assimilation 67.8% with an improvement after treatment. There was a negative mineral balance which became positive. Carbohydrate absorption was normal. In a third case of chronic colitis, with diarrhoea, abdominal pain, and loss of weight the assimilation of protein, fat, carbohydrate, calcium, and phosphate was practically normal on admission and after treatment. These findings were taken to indicate that the main interference with absorption of food in chronic entero-colitis occurs in the small intestine. The authors emphasize that this should be taken into consideration in treatment of cases of chronic entero-colitis, the food intake being adjusted accordingly.

N. Chatelain

Abstracts of World Medicine. Vol.8 1950.

FRUMIN, Z. D.

Secretory-evacuatory function of the stomach and assimilation of food in man following esophageal resection with bilateral vagotomy. Ter. arkh., Moskva 23 no. 6:73-75 Nov-Dec 1951.(CLML 21:3)

1. Doctor Medical Sciences. 2. Of the Laboratory of Assimilation, Department of the Physiology of Nutrition, Institute of Nutrition of the Academy of Medical Sciences USSR.

FRUMIN, Z., doktor meditsinskikh nauk (Moskva); EYDEL'MAN, M., kandidat biologicheskikh nauk (Khar'kov).

A new textbook ("The physiology of nutrition." A.M.Breitburg.
Reviewed by Z.Frumin and M.Eidel'man). Sov.torg. no.10:40-41 0
'56. (MLRA 9:12)
(Nutrition) (Breitburg, A.M.)

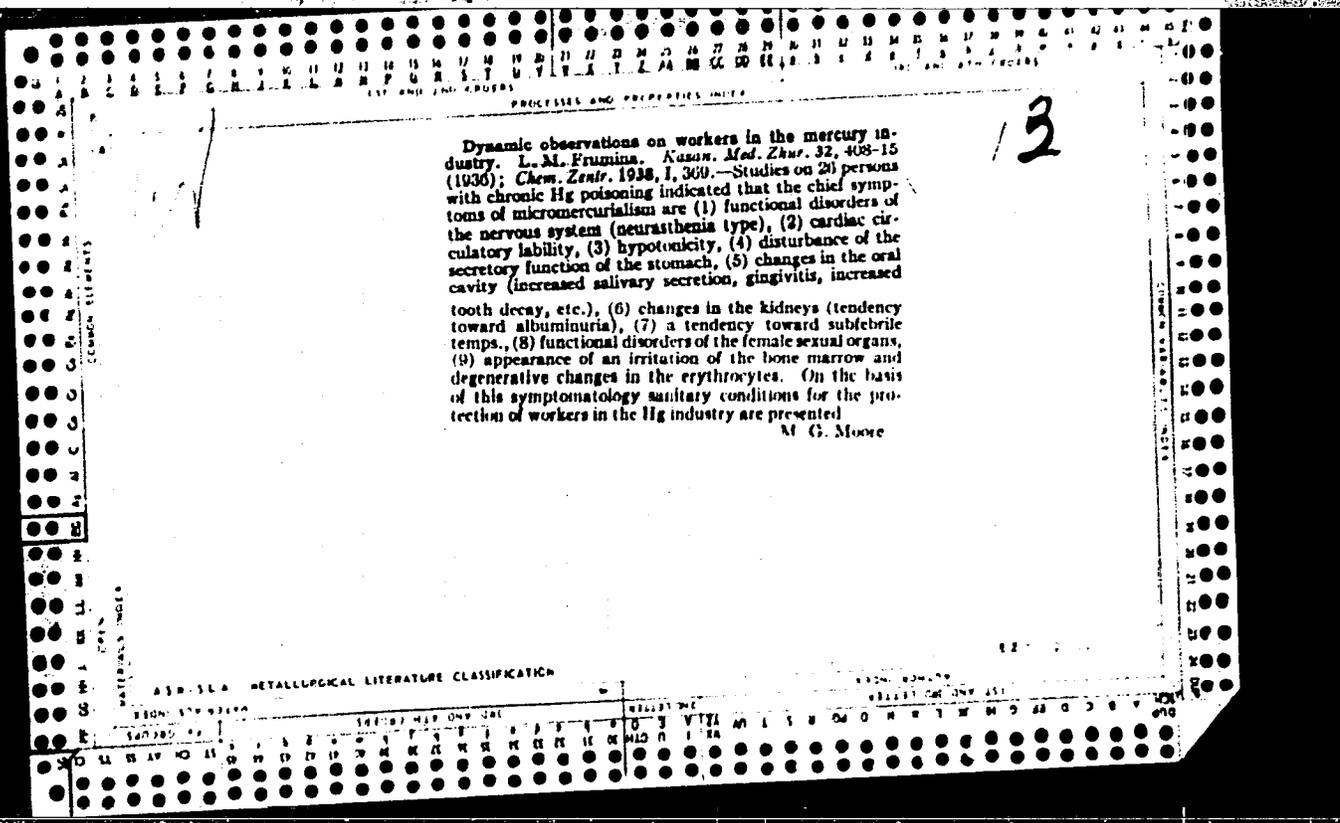
FRUMIN, Z.D.; BESSONOV, S.M.

Assimilation of nutritional substances and its relation to bran processing [with summary in English]. Vop.pit. 17 no.6:44-49 N-D '58, (MIRA 12:2)

1. Iz laboratorii obmena veshchestv i energii (zav. - chlen-korrespondent AMN SSSR prof. O.P. Molchanova) i otdela pishchevoy tekhnologii (zav. - kand. tekhn. nauk S.M. Bessonov) Instituta pitaniya AMN SSSR, Moskva.

(CEREALS,

eff. of bran processing technics on assimilation of nutrition substances in animals (Rus))



FRUMINA, L.M. i GUKASYAN, A.G.

22015 Frumina, L.M. i Gukasyan, A.G. K voprosu o lechenii zatyazhrego septicheskogo endokardita. VSB: Penitsillinoterapiya M., 1949, s. 42-57.

SO: L-to, is' Zhurnal'nykh Statey, No. 29, Moskva, 1949

FRUMINA, L. M.

"Conditions of the Cardiovascular System Before and After Operations in Arteriovenous Aneurysms," Khirurgiya, No.5, 1952

FRUMINA, L.M., kandidat meditsinskikh nauk

Dynamic electrocardiographic changes in isolated pericardial wound.
Terap. arkh. 26 no.5:78-81 S-0 '54. (MLRA 8:2)

1. Iz kafedry fakul'tetskoy khirurgii (zav. prof. I.S.Zhorov) i
terapevticheskoy kliniki (zav. prof. A.G.Gukasyan) sanitarno-gigiyeni-
cheskogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo instituta.

(WOUNDS AND INJURIES,
pericardium, ECG)

(PERICARDIUM, wounds and injuries,
ECG)

(ELECTROCARDIOGRAPHY, in various diseases,
pericardial wds.)

FRUMINA, L.M.

Changes in some hemodynamic indexes during various types of anesthesia.
Trudy 1-go MMI 3:83-102 '57. (MIRA 14:5)
(ANESTHEISA) (BLOOD)

MUSTAFIN, Is., prof., d-r na khimicheskite nauki; FRUMINA, Nat., k.
kh. n.

"Handbook of chemical, and physical and mechanical studies
on silicate and carbonate materials" by [inzh.] Georgi N.
Babachev, and [inzh.] Liuben K. Lukashov. Reviewed by
Is. Mustafin, and Nat. Frumina. Khim i industriia 36
no.6:233 '64.

1. Head, Chair of Analytic Chemistry at the Saratov University
(for Mustafin). 2. Head, Department of Analytic Chemistry at
the Scientific Research Institute of Chemistry, Saratov University.

FRUMINA, N. S.

USSR: Control of manufacture of hydrogenated fat. L. M. Kul'berg, T. I. Badgeyn, L. A. Molot, and N. S. Frumina (State Univ., Saratov). *Mastobina-Zhironiya*, No. 1, 19-23(1935).—Photometric detn. of Ni (in hydrogenated fat): 2 g. of sample dissolved in 10-15 ml. of a suitable solvent in a separatory funnel is shaken for 5 min. with 10 ml. of HCl (1:3) at 70-80° and sepd., and the aq. layer is filtered. A 2-ml. aliquot in a 10-ml. graduated test tube is treated with 3 drops satd. Rochelle salt soln., 3 ml. of 10% NaOH soln., and 2 ml. of 1% dimethylglyoxime in 5% NaOH soln. The mixt. is made up to 10 ml. vol. with 3% (NH₄)₂S₂O₈ soln., thoroughly shaken, and after 5-7 min. the color intensity of the soln. is measured with photometer at 470 mμ. This colorimetric method is simplified by use of a series of standards contg. 3-15 γ of Ni and 0.02 ml. of each 0.5M Co(NO₃)₂ and 0.1N K₂CrO₇ made up to 10 ml. vol. with distd. water. Both methods agree, within exptl. error, with the known gravimetric method. Determination of Ni in the presence of Fe and Cu: A procedure for Ni-Fe-Cu hydrogenation catalyst is based on titration of Fe with KMnO₄, detn. of Cu iodometrically, and detn. of Ni by titration with Ni dimethylglyoxime soln. Titer of technical hydrogenated fat: Approx. 6 g. of hydrogenated fat in a 100-ml. Erlenmeyer flask is sapond. with 5 ml. of EtOH and 5 ml. of NaOH soln. (sp. gr. 1.32), dissolved in 8 ml. of warm EtOH, and the fatty acids are set free by addn. of 8 ml. 25% H₂SO₄. The acids are sepd., washed with hot water until washing is neutral, partially dried at 135°, filtered into a test tube, and fully dried at 105°. The titer is then detd. by the use of Dewar's app. following the standard procedure. Vladimir N. Zrukovsky

FRUMINA, N. S.

FRUMINA, N. S. "Investigation of the Oxidation-Reduction Indicators of the Diphenylamine Series." Saratov State U imeni N. G. Chernyshevskiy. Saratov, 1955. (DISSERTATION FOR THE DEGREE OF CANDIDATE IN CHEMICAL SCIENCE).

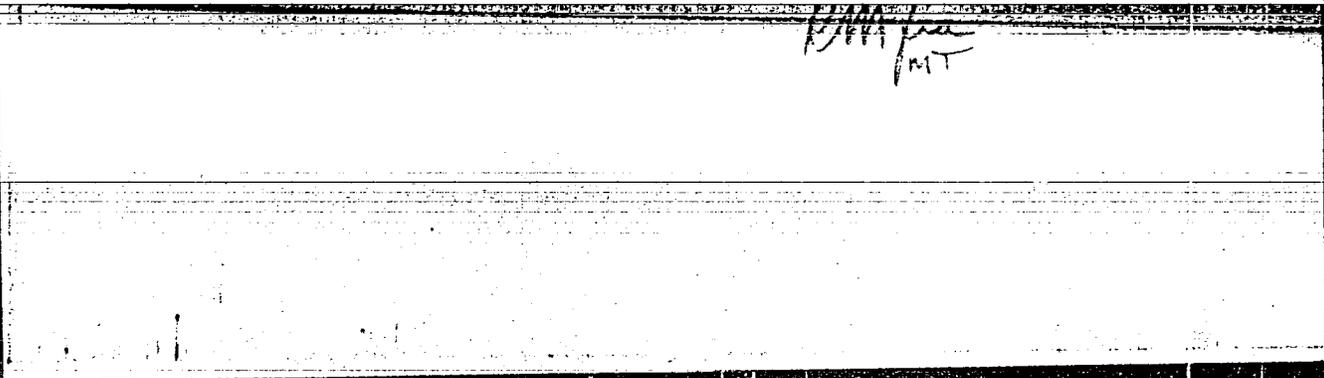
So.: Knizhnaya Letopis'
No. 27, July 2, 1955.

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FRUMINA, N. S.

3926. Study of oxidation-reducing indicators.
II. Ferrous as an oxidation-reduction indicator in
micro-analysis. / L. M. Joubert and N. S. Frumina.
Uch. Zap. Saratovsk. Univ., 1956, 43, 109-115.
Ref. Zhur. Khim., 1957, Abstr. No. 23134. A
study has been made of ferrous as a redox indicator
in the titration of di- and tri-valent ions with
solutions (10⁻², 10⁻³ and 10⁻⁴ N) of ceric, ceric
(K₂Cr₂O₇, NH₄VO₃, FeSO₄) and ceric
results obtained are compared with those obtained
with phenylanthraquinone. The results are
using ferrous in volumetric micro-analysis of
investigated order of titration, concentration
of mineral acids used, concentration of reagent groups.
D. Kozlov

FRUMINA

BADEYEVA, T.I., kandidat khimicheskikh nauk; MOIOT, L.A., kandidat
khimicheskikh nauk; FRUMINA, N.S., nauchnyy sotrudnik; PETROKOVA, K.G.

Rapid method of determining calcium in slurry. TSement 23 no.3:22-23
My-Je '57. (MLBA 10:7)

(Cement--Analysis) (Calcium) (Trilon B)

AUTHOR: Frumina, N. S. SOV/75-13-5-15/24

TITLE: New Color Reactions on Ferricyanides (Novyye tsvetnyye reaktsii na ferritsianidy)

PERIODICAL: Zhurnal analiticheskoy khimii, 1958, Vol 13, Nr 5, pp 586-589 (USSR)

ABSTRACT: Although recently many color reactions on ferricyanide have been suggested, but very little photometric methods for its determination are known. The reason is that as final product of the reaction mostly a colored precipitate is obtained. Nearly all known reactions on ferricyanide are based on their capability of oxidizing organic amine compounds under formation of strongly colored reaction products. The sensitivity of such reactions is considerably higher, if the resulting ferrocyanide ion is removed from the reaction by precipitation with zinc ions. All these reactions, however, are not specific, since many strong oxidants give analogous reactions on acid medium. Willard and Monalo (Ref 4) proved that some substituted diphenylamine carboxylic acids are suitable for the reduction of ferricyanides in alkaline solution under formation of colored products. This reaction is highly specific for ferricyanides, since in alkaline

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